Remarks

Claims 1-16, 18, 20, 21, 23 and 28-43 are canceled. Applicants reserve the right to pursue the subject matter of the original claims in continuing applications. Claims 17, 19, 22, 24-27 and 44 are pending in the application.

I. Drawings

The Examiner has objected to the drawings. (Office Action, page 2.) Applicants thank the Examiner for the courtesy of a phone interview on November 13, 2007. In this interview Examiner Horning confirmed that the objection to the drawings was issued in error and that the formal drawings submitted May 21, 2004 were acceptable.

II. Objections

The Examiner has objected to the inclusion of a hyperlink in the specification. (Office Action, page 3.) Applicants thank the Examiner for pointing out this informality. Paragraph [1095] of the specification is amended herein to replace the hyperlink with a reference to the company name and address.

III. Rejection of the Claims Under 35 U.S.C. § 103(a)

Claims 17, 19-20, 22 and 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson *et al.* (*Proc. Natl. Acad. Sci. USA 79*:2748-2752 (1982)). (Office Action, page 4.) Applicants respectfully disagree.

The Examiner asserts that Anderson *et al.* "describes a method in which a reaction occurs between a gene of interest and a simian virus 40 plasmid via recombination (whole document, see Abstract)." (Office Action, page 5.) Applicants respectfully assert that Anderson *et al.* does not disclose the use of "recombination sites", as this term is used with respect to the claims presented herein.

Applicants note that in Anderson *et al.*, DNA encoding thymidine kinase was co-transfected with SV40 or pBR322 DNA into mouse cells. Analysis of a recombinant plasmid obtained by plasmid rescue indicated that the thymidine kinase gene had become joined with the SV40 or pBR322 sequences and that a small area of homology may have been involved in the

recombination process. However, the recombination disclosed in Anderson *et al.* is suggested to be "homologous recombination, non-homologous recombination or simple ligation." (See Anderson *et al.* page 2752, first column, lines 5-7.) With respect to speculation regarding molecular events, Anderson *et al.* states "one might envision that the recognition and pairing involves a three-strand mechanism similar to that suggested by Meselson and Radding (35) for homologous recombination." (See Anderson *et al.*, page 2752, first column, lines 51-53.)

A recombination site, as described in the captioned application,

> refers to a recognition sequence on a nucleic acid molecule that participates in an integration/recombination reaction by recombination proteins. Recombination sites are discrete sections or segments of nucleic acid on the participating nucleic acid molecules that are recognized and bound by a site-specific recombination protein during the initial stages of integration or recombination. For example, the recombination site for Cre recombinase is *lox*P, which is a 34 base pair sequence comprised of two 13 base pair inverted repeats (serving as the recombinase binding sites) flanking an 8 base pair core sequence (see FIG. 1 of Sauer, B., *Curr. Opin. Biotech. 5*:521-527 (1994)). Other examples of recombination sites include the *att*B, *att*P, *att*L, and *att*R sequences described in U.S. provisional patent applications 60/136,744, filed May 28, 1999, and 60/188,000, filed Mar. 9, 2000, and in co-pending U.S. patent applications Ser. Nos. 09/517,466 and 09/732,91--all of which are specifically incorporated herein by reference-and mutants, fragments, variants and derivatives thereof, which are recognized by the recombination protein λ Int and by the auxiliary proteins integration host factor (IHF), FIS and excisionase (Xis) (see Landy, *Curr. Opin. Biotech. 3*:699-707 (1993)).

(Specification, paragraph [0163], underlining added.)

Recombination sites are also described in the examples of the captioned application. For example, in Example 1, the vector pAd/CMV/V5-DEST (Figure 6) is described which contains a selectable marker between *att*R1 and *att*R2 recombination sites. A sequence of interest that is flanked by compatible recombination sites *att*L1 and *att*L2 may be inserted into the vector using an LR recombination reaction. Recombination sites described in the captioned application include sites such at *lox* sites or *att* sites and the use of recombination proteins such as Cre or Int.

Applicants further note that the use of *att* recombination sites is specifically recited in claim 44 and the use of *att* recombination sites is not found in Anderson *et al.*[1] Thus, Applicants are confused as to why the Examiner has not indicated that claim 44 is directed to allowable subject matter.

Anderson *et al.* does not disclose the use of recombination sites, as described in the captioned application, in the transformation of mouse cells with the thymidine kinase gene. Further, there is no disclosure in Anderson *et al.* of first and second recombination sites which do not recombine with each other as recited in the claims presented herein. Because the cited reference, Anderson *et al.*, does not disclose all of the limitations of the claims, Applicants respectfully note that the Examiner has failed to establish a *prima facia* case of obviousness.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. § 103(a).

IV. Double Patenting

Claims 17 and 44 stand rejected on the ground of non-statutory obviousness type double patenting as being unpatentable over claims 1, 17 and 18 of U.S. Patent No. 7,198,924. (Office Action, page 6.) Applicants defer responding to this ground of rejection until patentable subject matter has been determined, at which time Applicants will consider filing a terminal disclaimer.

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1 While Applicants do not believe it is necessary, Applicants would agree to clarify the subject matter of claim 17 by amending it to recite "site specific" recombination sites. If this would overcome the rejection based on Anderson *et al.*, Applicants request that the Examiner call Applicants' undersigned representative at the number provided below.

Conclusion

Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

/Peter G. Foiles/

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Date: November 15, 2007